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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,684	12/08/2003	David B. Watson	15823-010001	4359

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EXAMINER
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RODRIGUEZ, WILLIAM H

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/730,684	<b>Applicant(s)</b> WATSON ET AL.	
	<b>Examiner</b> William H. Rodriguez	<b>Art Unit</b> 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 18-26 and 32-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,9-17,27,30 and 31 is/are rejected.
- 7) ☒ Claim(s) 3,4,6-8,28 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- 1. ☐ Certified copies of the priority documents have been received.
  - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/21/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I directed to Figure 3 (claims 1-17 and 27-31) in the reply filed on 6/2/05 is acknowledged.

### *Specification*

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The **abstract should be** in narrative form and generally **limited to a single paragraph** on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The current abstract contains two paragraphs. Appropriate correction is required.

### *Claim Objections*

3. Claims 5, 27 and 31 are objected to because of the following informalities:

Claim 5 recites the limitation "the source waste heat" in line 1. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim 27 recites the limitation "the inlet" in line 2. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim 27 recites the limitation "the outlet" in line 4. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim 31 recites the limitation "the inlet" in line 2. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim 31 recites the limitation "the outlet" in line 4. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

***Drawings***

4. The drawings (particularly the elected species of **Figure 3**) are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "the reciprocating engine(s) driving at least one secondary electric generator (claim 3); the gas fired turbine engine(s) driving at least one secondary electric generator (claim 4); the recovered waste heat from a plant's process via a heat exchanger (claim 5); the boiler feed water condenser (claim 6); the municipality gas distribution network (claim 12); the at least one boiler (claim 15); the second generator driven by a steam turbine (claim 15); and the gas distribution network for a municipality (claim 31)" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

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renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 5 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by **Tomisaka (JP 354121347A)**.

With respect to claim 1, **Tomisaka** teaches a system comprising: a gas expansion engine E' receiving a supply of pressurized natural gas, and a generator G being driven by said expansion engine through a shaft. See particularly Figure 7.

With respect to claims 2 and 5, **Tomisaka** teaches that the system further comprises a heat exchanger V as the source for heating the supplied natural gas. See particularly Figure 7.

With respect to claim 9, **Tomisaka** teaches that the gas expansion engine is a turbo expander. See particularly Figure 7.

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7. Claims 15, 27 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by **Bachmann (US. 2001/0029732)**.

With respect to claim 15, **Bachmann** teaches a system comprising: a gas expansion engine 17 receiving a supply of pressurized natural gas 19, a first generator 13 driven by said gas expansion engine through a shaft; at least one boiler 33 supplied with the expanded gas coming out of gas expansion engine 17 (at a lower pressure), and a second generator 24 driven by a steam turbine 25 using steam generated by said boiler 33. See particularly Figure 1.

With respect to claims 27 and 30, since **Bachmann** has the same structure as claimed, it is inherent that **Bachmann's** system would be able to perform the recited method steps.

### *Claim Rejections - 35 USC § 103*

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 10, 12, 13, 14 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tomisaka (JP 354121347A)**.

With respect to claim 10, **Tomisaka** teaches a system comprising: a gas expansion engine E' receiving a supply of pressurized natural gas, and a generator G being driven by said expansion engine through a shaft (see particularly Figure 7). **Tomisaka** does not schematically show the gas turbine expansion engine and the generator mounted on a skid. However,

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mounting power plant components (engine and generator) on a skid was well known and within the level of one of ordinary skill in the art because a skid allowed the system to be transported as a unit to virtually any site where electric power was needed. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have placed Tomisaka's system on a skid in order to be able to transport the system as a unit to virtually any site where electric power was needed.

With respect to claims 12, 13 and 31, **Tomisaka** teaches a system comprising: a gas expansion engine E' receiving a supply of pressurized natural gas, and a generator G being driven by said expansion engine through a shaft (see particularly Figure 7). **Tomisaka** does not schematically show a municipality gas distribution network receiving the expanded natural gas. However, expanding natural gas through an expansion engine in order to lower its pressure for delivering/transporting to a consumption site such as a municipality was a well-known practice at the time the invention was made. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the available expanded natural gas from Tomisakas' expansion engine as the source for feeding a consumption site such as a municipality.

With regards to the recitation "preassembled" in claim 14, the use of one piece construction (preassembled expansion engine with generator) instead of the structure disclosed in Tomisaka would be merely a matter of obvious engineering choice, which is not sufficient by itself to patentably distinguish the invention over an otherwise old device satisfying the structural limitations but comprised of several parts, as is the case here.

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10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Wissolik (US. 6,196,021)**.

**Wissolik** teaches a system comprising: a gas expansion engine 103 receiving a supply of pressurized natural gas, and a machine 108 having a mechanical drive coupled to said expansion engine through a shaft (see particularly Figure 5). **Wissolik** does not schematically show the gas turbine expansion engine and the generator mounted on a skid. However, mounting power plant components (engine and generator) on a skid was well known and within the level of one of ordinary skill in the art because a skid allowed the system to be transported as a unit to virtually any site where electric power was needed. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have placed **Wissolik's** system on a skid in order to be able to transport the system as a unit to virtually any site where electric power was needed.

11. Claims 16 and 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Bachmann (US. 2001/0029732)**.

With regards to the recitation "preassembled" in claim 16, the use of one piece construction (preassembled expansion engine with generator) instead of the structure disclosed in **Bachman** would be merely a matter of obvious engineering choice, which is not sufficient by itself to patentably distinguish the invention over an otherwise old device satisfying the structural limitations but comprised of several parts, as is the case here.



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With respect to claim 17, **Bachmann** discussed in more detail above does not schematically show the gas turbine expansion engine and the generator mounted on a skid. However, mounting power plant components (engine and generator) on a skid was well known and within the level of one of ordinary skill in the art because a skid allowed the system to be transported as a unit to virtually any site where electric power was needed. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have placed Bachmann's system on a skid in order to be able to transport the system as a unit to virtually any site where electric power was needed.

***Allowable Subject Matter***

12. Claims 3, 4, 6-8 and 28-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Contact information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Rodriguez whose telephone number is 571-272-4831. The examiner can normally be reached on Monday-Friday 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Rodriguez

Primary Examiner

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3/21/06